

## WHAT IS CLAIMED IS:

1. A cursor control apparatus which performs cursor control for moving a cursor displayed on a display screen of a display device to a coordinate position of one of a plurality of points visibly or invisibly set in the display screen in accordance with a designation indicating a moving direction of the cursor in the display screen, comprising:

path calculation means for calculating a path which circulates through vicinities of positions of the points on the basis of coordinate positions of the points in the display screen;

intersection point coordinate position calculation means for calculating a coordinate position of an intersection point of the path and a line segment extending from a predetermined coordinate position in a region surrounded by the path calculated by said path calculation means in the moving direction of the cursor indicated by the designation; and

display control means for moving a display position of the cursor to the calculated intersection point coordinate position.

2. The apparatus according to claim 1, wherein the coordinate positions of the points are obtained by projecting coordinate positions, which are represented in a three-dimensional coordinate system, of

corresponding objects in a three-dimensional virtual space.

3. The apparatus according to claim 1, wherein the  
5 plurality of points include a point whose coordinate position in the display screen dynamically changes.

4. The apparatus according to claims 1, wherein when  
line segments are drawn from the predetermined  
10 coordinate position in the region surrounded by the path calculated by said path calculation means to the points, the points are arranged on the display screen so as to avoid a situation wherein two or more of the points are located on one of the line segments.

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5. The apparatus according to claim 1, wherein  
said path calculation means searches for the  
coordinate positions of the points in a predetermined  
rotational direction around the predetermined  
20 coordinate position based on the coordinate positions of the points, and

the path which circulates through all the points  
is obtained by performing a process of calculating a  
partial path which connects a found coordinate position  
25 and a next found coordinate position for each point.

6. The apparatus according to claim 5, wherein the

partial path is represented by a curve.

7. The apparatus according to claim 5, wherein the partial path is represented by a line segment.

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8. A cursor control program for causing a computer to perform cursor control for moving a cursor displayed on a display screen of a display device of the computer to a coordinate position of one of a plurality of points  
10 visibly or invisibly set in the display screen in accordance with a designation indicating a moving direction of the cursor in the display screen, wherein

the program causes the computer to perform:

a path calculation step of calculating a path  
15 which circulates through vicinities of positions of the points on the basis of coordinate positions of the points in the display screen;

an intersection point coordinate position calculation step of calculating a coordinate position  
20 of an intersection point of the path and a line segment extending from a predetermined coordinate position in a region surrounded by the path calculated in the path calculation step in the moving direction of the cursor indicated by the designation; and

25 a display control step of moving a display position of the cursor to the calculated intersection point coordinate position.